

# Warm Up

Would these side lengths form a right triangle?

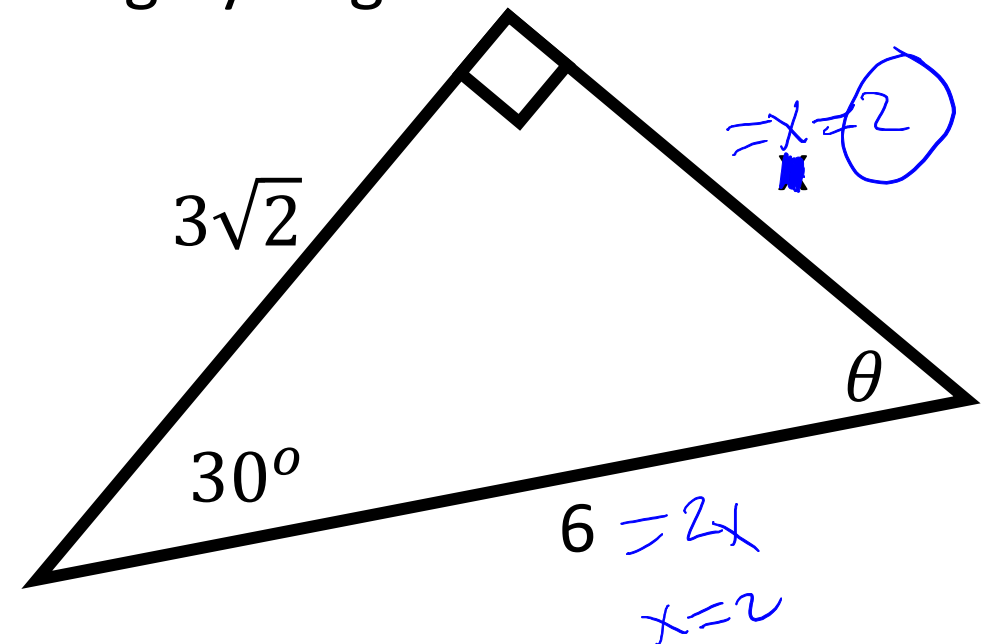
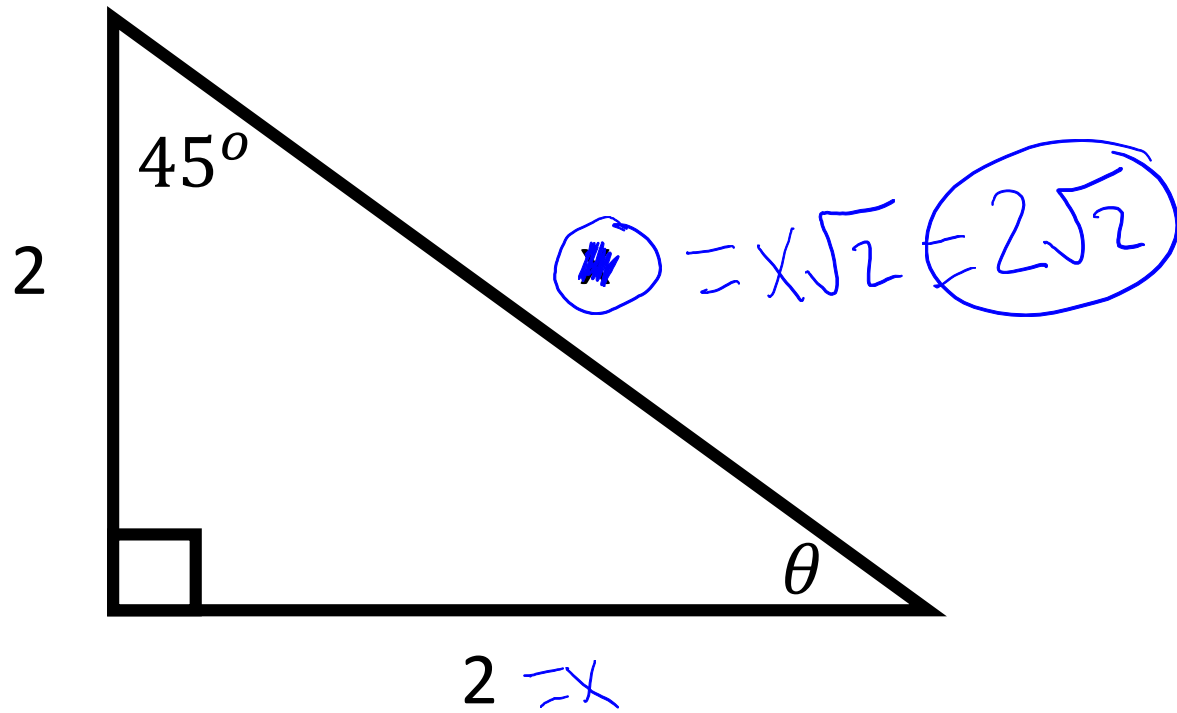
6, 8, 10  
 $6^2 + 8^2 = 10^2$  ✓ Yes

2, 3, 13  
No  $2^2 + 3^2 \neq 13^2$

8, 9, 10  
 $8^2 + 9^2 \neq 10^2$  No

10, 24, 26  
 $10^2 + 24^2 = 26^2$  Yes

Determine the missing angle and side length using Pythagorean Theorem.



## Homework

1.  $2\sqrt{5}$

2.  $\sqrt{55}$

3.  $6\sqrt{6}$

4.  $\sqrt{74}$

1. 10 ft.

2. 12 ft.

3. No ( $36^2 + 18^2 \neq 43^2$ )

4.  $4\sqrt{13}$  ft.

5.  $90\sqrt{2}$ . Runners more frequently try to steal 2<sup>nd</sup> because it is farther from home than 3<sup>rd</sup>.

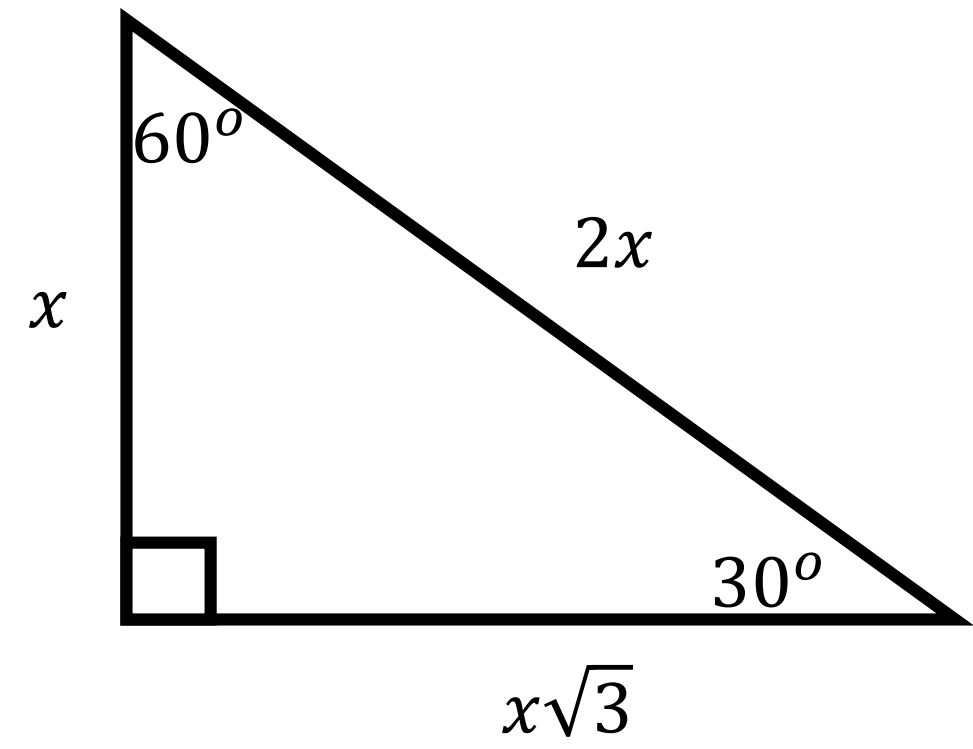
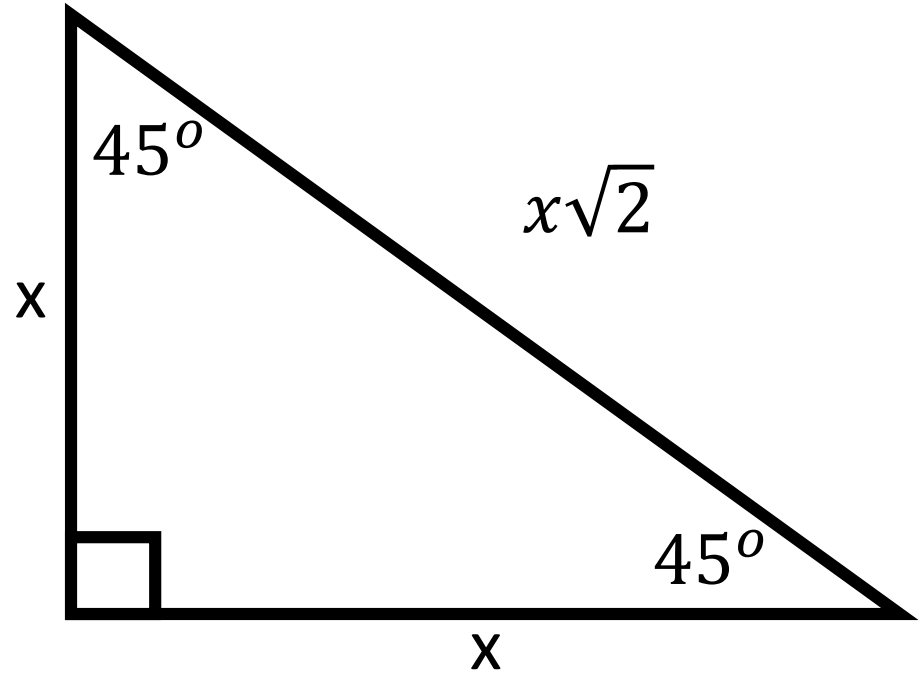
# Notes

Special right triangle

45-45-90

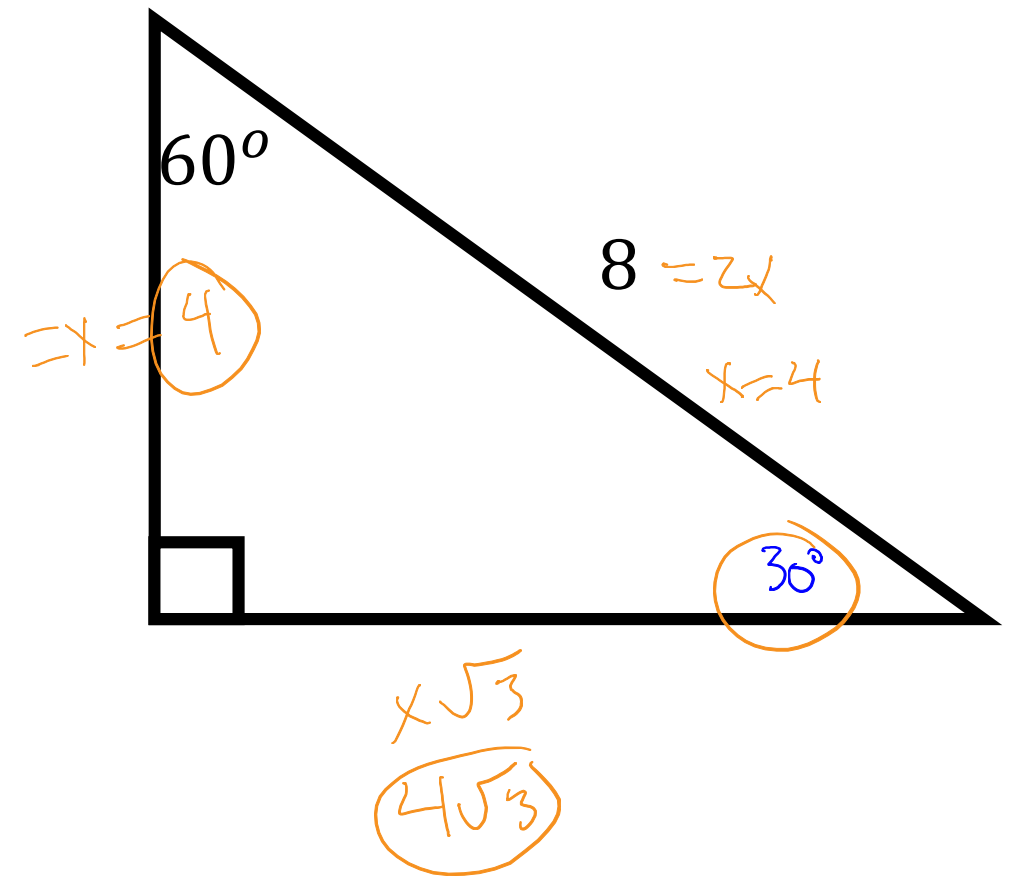
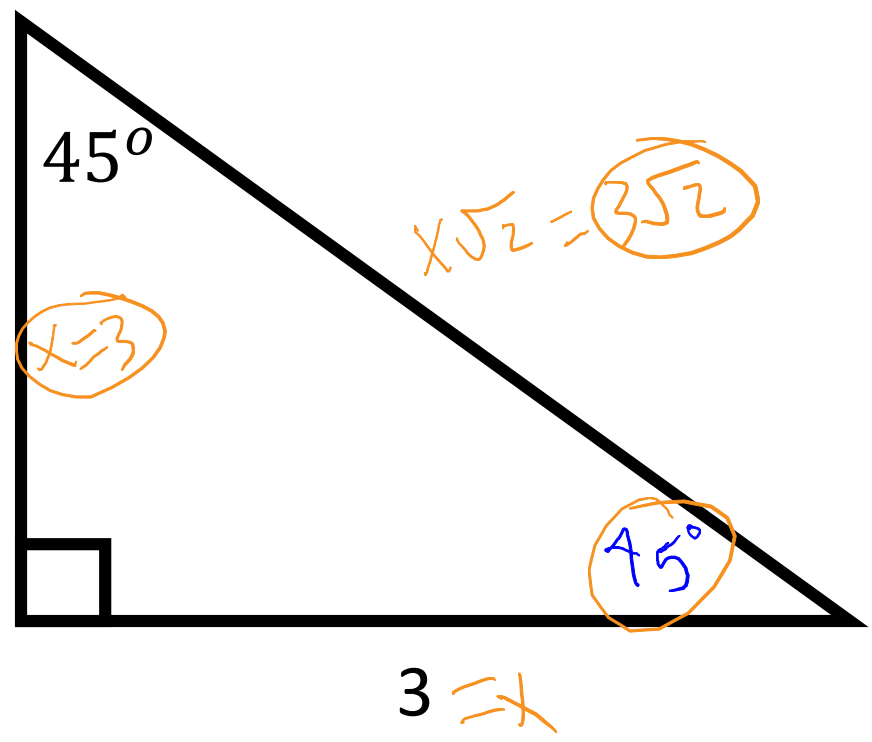
Special right triangle

30-60-90



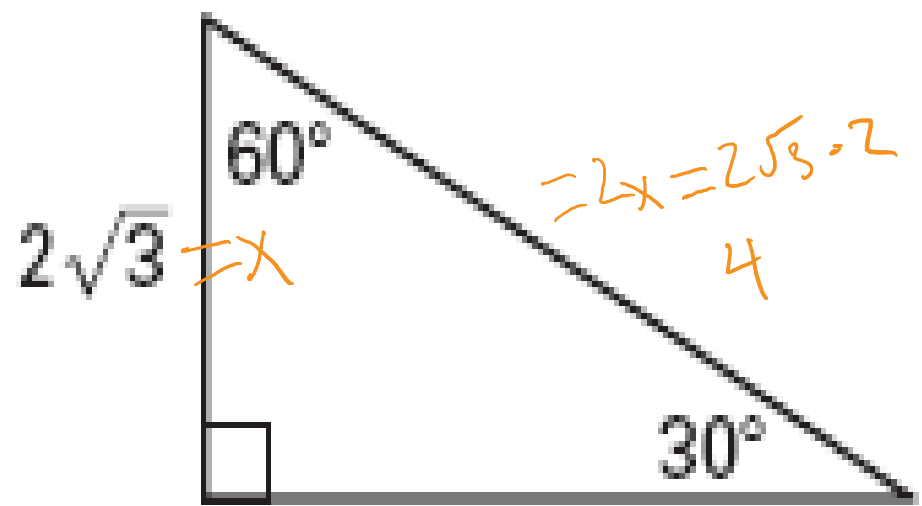
# Notes

Given the following, find all sides and angle measures.

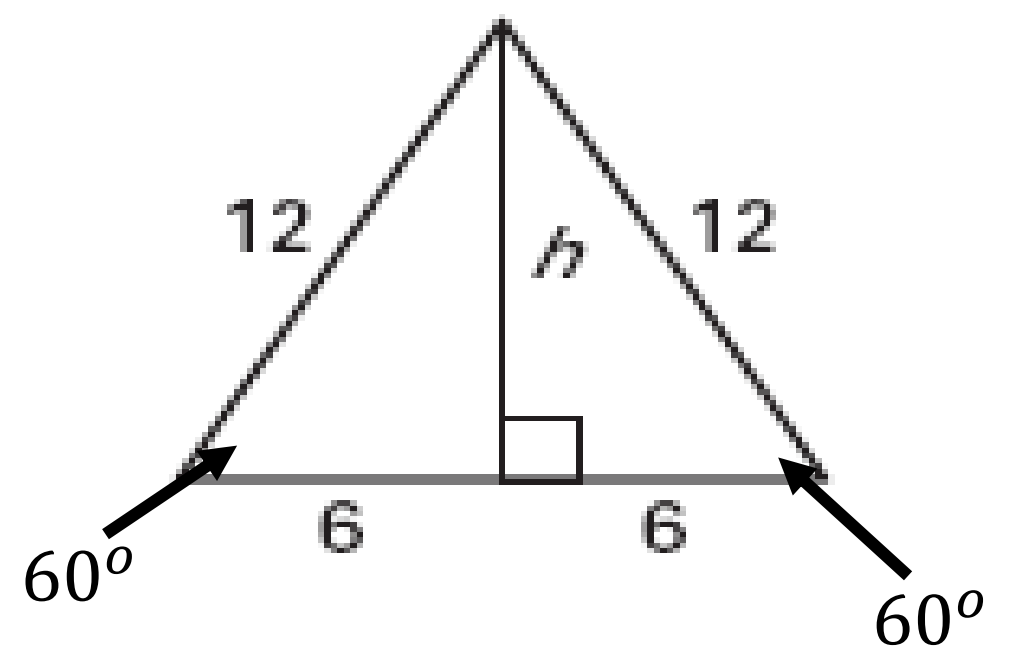


# Notes

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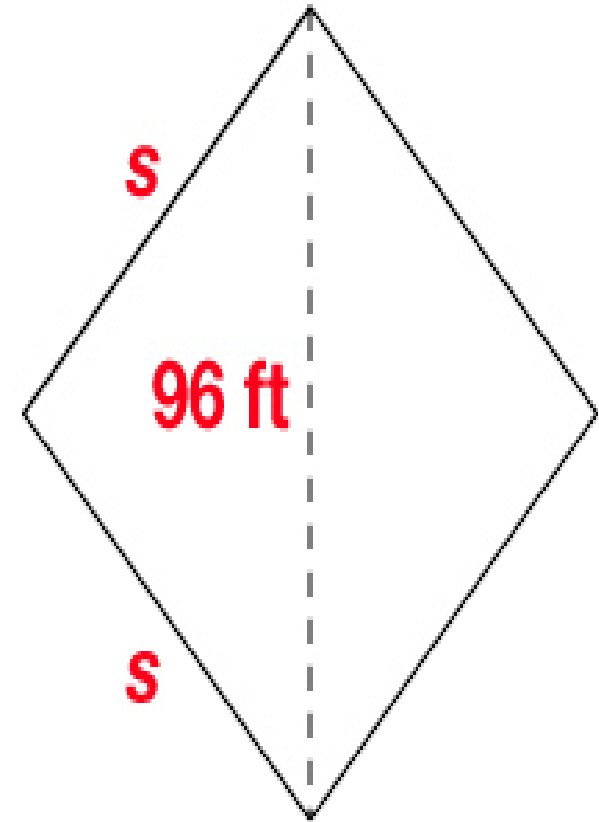


~~4~~  
 $x \cdot \sqrt{3}$   
 $= 2\sqrt{3} \cdot \sqrt{3}$   
 $= 6$



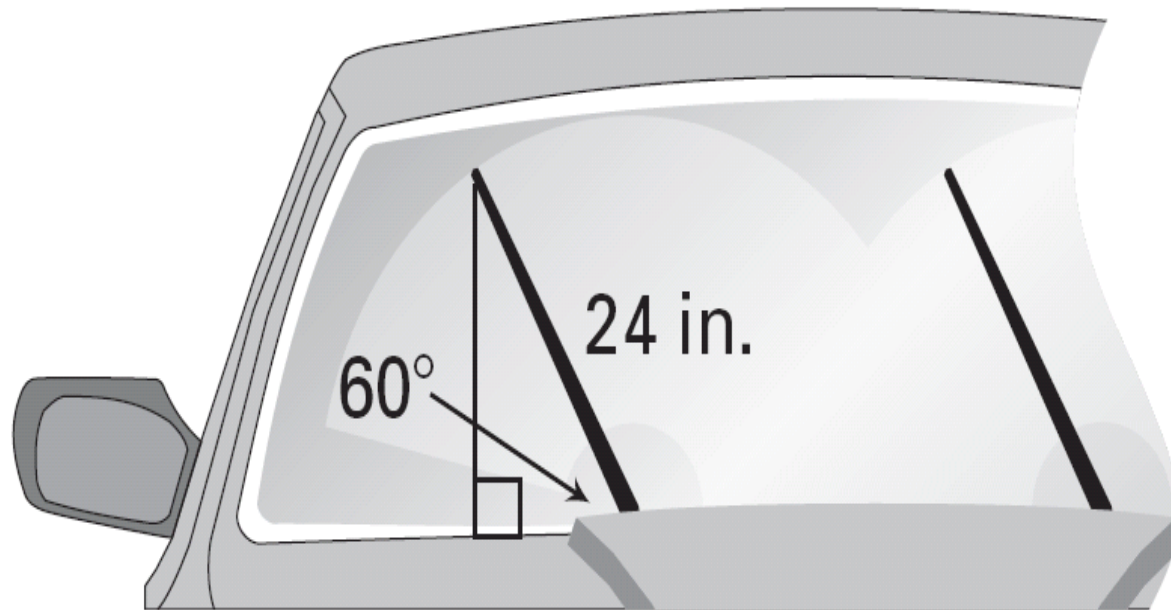
Notes

The distance from one corner to the opposite corner of a square playground is 96 ft. To the nearest foot, how long is each side of the playground?



## Notes

A car is turned off while the windshield wipers are moving. The 24 inch wipers stop, making a  $60^\circ$  angle with the bottom of the windshield. How far from the bottom of the windshield are the ends of the wipers?



Notes

What is the height of an equilateral triangle with sides that are 12 cm long?

